

REMARKS/ARGUMENTS

Applicants have incorporated the Examiner's suggested amendment including allowable subject matter, resulting from the Examiner interview of April 28, 2009 into the amended claims provided herewith.

Claims 1, 18 and 27 are pending in the present application. Claims 1, 18 and 27 are amended. Support for amendments to the claims may be found in the specification in paragraphs [0047], [0048], [0049], [0050], [0053], [0055], [0056], [0068], [0070] and [0076].

Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. § 101

The Examiner has rejected claims 1, 18 and 27 under 35 U.S.C. § 101 as being directed towards non-statutory subject matter. The Examiner states:

Claims 1, 18, and 27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Based on the Applicant's specification, the recited "repository adapter" of Claim 1 and the recited "integrated development environment" of Claim 27 appear to be implemented in software. Any claim whose limitations are either explicitly claimed as being implemented in software, or could be reasonably interpreted as being implemented in software, must be claimed in combination with an appropriate medium to establish a statutory category of invention and enable any functionality to be realized in order for the claimed subject matter to be statutory under the provisions of 35 U.S.C. § 101.

Claim 18 is directed toward a method for collaboratively authoring documents. However, for a method to be statutory it must be tied to another statutory class (such as a particular apparatus) or transform underlying subject matter (such as an article or materials) to a different state or thing. Since the claims do not appear to do either of these the method is non-statutory.

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Applicants have amended claims 1, 18 and 27 in compliance with the statutory requirements. In particular, claim 1 is directed to an apparatus, claim 18 is directed to a combination of a computer implemented method in a computer system and claim 27 is directed

to a combination of an integrated development environment in a computer system. The amended claims are thus directed toward statutory categories with required transformation of underlying subject matter, including the updating of documents through client changes to a document repository maintained on the computer system. Accordingly, claims 1, 18 and 27 comply with the statutory requirements and overcome the Examiner's rejection.

II. 35 U.S.C. § 112, Second Paragraph

The Examiner has rejected claims 1, 18 and 27 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which applicants regard as the invention. The Examiner states:

Claims 1, 18, and 27 contain several instances of limitations such as "adapted to", "adapted for", and simply "to" and "for". Such limitations indicate nonfunctional descriptive material and are not functionally involved in the steps recited. Hence, such descriptive material does not distinguish the claimed invention from the prior art in terms of patentability. See *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994).

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Applicants have amended claims 1, 18 and 27 to remove the limitations noted. Amended claims therefore provide the desired specificity required of functional descriptive material and elements of the claims are therefore functionally involved in the steps recited. Accordingly, claims 1, 18 and 27 are in compliance. Therefore, the rejection of claims 1, 18 and 27 under 35 U.S.C. § 112, second paragraph has been overcome.

III. 35 U.S.C. § 103, Obviousness

The Examiner has rejected claims 1, 18 and 27 under 35 U.S.C. § 103 as being obvious over Hadfield et al, Document Collaboration Using A Common Database, U.S. Patent Application Publication 2003/0112273, (June 19, 2003), (hereinafter "*Hadfield*") in view of Hugh, Method and Apparatus for Sharing Many Thought Databases Among Many Clients, U.S.

Patent Application Publication 2003/0117434, (June 26, 2003), (hereinafter “*Hugh*”). The Examiner states:

Claims 1, 18, 27 (A; Figure 2, paragraphs 5-16). A does not explicitly disclose, however B discloses communicating to the client a response indicating a successful update (B; paragraph 807).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify updating, as disclosed by A, to include communicating to the client a response indicating a successful update, as disclosed by B, in order to provide an improved document collaboration system.

A does not explicitly disclose a WebDAV repository, however it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a repository, as disclosed by Hadfield, to comprise a WebDAV repository (disclosed in the background of Applicant's specification) since WebDAV was a well known system for collaborative document management.

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The Examiner bears the burden of establishing a *prima facie* case of obviousness based on prior art when rejecting claims under 35 U.S.C. § 103. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). The prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). In determining obviousness, the scope and content of the prior art are... determined; differences between the prior art and the claims at issue are... ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or non-obviousness of the subject matter is determined. *Graham v. John Deere Co.*, 383 U.S. 1 (1966). “Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR Int’l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (April 30, 2007). “Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal

conclusion of obviousness. *Id.* (citing *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006)).”

Claim 1 is as follows:

An apparatus for the collaborative authoring by a plurality of clients of documents for storage in a repository, said apparatus comprising:

a controller, in a computer system, for processing and responding to client requests for authoring said documents, wherein said processing is performed in a transactional manner, said documents define a document model in which said documents are each associated with at least one respective hypertext reference, said hypertext reference comprising at least one of a parent relationship and a child relationship and said controller maintains a repository adapter document model subset from documents processed in accordance with said client requests,

an asynchronous communicator in said controller asynchronously communicates a document model update for updating a respective client document model subset maintained by each of the plurality of clients, wherein the client requests comprise serialized updates to the repository adapter document model to affect changes to selected documents for storage to a repository in a persistent storage of the computer system;

a lock mechanism in said controller locks said selected documents stored in said repository, wherein said controller processes said serialized updates using a working copy of said selected documents in response to a success of setting a lock of said selected documents,

wherein said controller stores into said repository said selected documents successfully processed from said serialized updates, wherein said controller communicates to the client the serialized updates indicative of a success of the client request, said success defined by the success of the locking, processing and storing of the affected selected documents, wherein said controller, responsive to a client request for a document stored in said repository, sends the document from the repository; and

wherein said apparatus communicates with said clients, to receive client requests and to send client responses to said requests; and

wherein said apparatus communicates with said repository, to send repository requests for authoring said documents and to receive repository responses to said requests for processing said client requests wherein the repository is a WebDAV repository, wherein said client request to change said document relationship comprises said asynchronous communicator performing said step of communicating a document model update, a lock mechanism performing said step of locking said selected documents and a controller performing said step of storing, for each document related to said document identified in said client request.

The teaching of *Hadfield* and *Hugh* does not provide a *prima facie* obviousness rejection of claim because the combination, when viewed as a whole, fails to teach each and every claim limitation. In particular, *Hadfield* and *Hugh* fail to teach the features of *a controller, in a*

computer system, for processing and responding to client requests for authoring said documents, wherein said processing is performed in a transactional manner, said documents define a document model in which said documents are each associated with at least one respective hypertext reference, said hypertext reference comprising at least one of a parent relationship and a child relationship and said controller maintains a repository adapter document model subset from documents processed in accordance with said client requests; an asynchronous communicator in said controller asynchronously communicates a document model update for updating a respective client document model subset maintained by each of the plurality of clients, wherein the client requests comprise serialized updates to the repository adapter document model to affect changes to selected documents for storage to a repository in a persistent storage of the computer system; wherein said controller stores into said repository said selected documents successfully processed from said serialized updates, wherein said controller communicates to the client the serialized updates indicative of a success of the client request, said success defined by the success of the locking, processing and storing of the affected selected documents, wherein said controller, responsive to a client request for a document stored in said repository, sends the document from the repository; and wherein said apparatus communicates with said repository, to send repository requests for authoring said documents and to receive repository responses to said requests for processing said client requests wherein the repository is a WebDAV repository, wherein said client request to change said document relationship comprises said asynchronous communicator performing said step of communicating a document model update , a lock mechanism performing said step of locking said selected documents and a controller performing said step of storing, for each document related to said document identified in said client request.

With regard to the feature of a controller, in a computer system, for processing and responding to client requests for authoring said documents, wherein said processing is performed in a transactional manner, said documents define a document model in which said documents are each associated with at least one respective hypertext reference, said hypertext reference comprising at least one of a parent relationship and a child relationship and said controller maintains a repository adapter document model subset from documents processed in accordance with said client requests, Hadfield teaches one or more replicas of a document,

wherein the replicas are edited by contributing authors. Changes made to the replicas are sent to the managing author for approval.

In contrast, the feature does not require replicas. The document model subset is the set of documents being processed directly. Further, documents are each associated with at least one respective hypertext reference, said hypertext reference comprising at least one of a parent relationship and a child relationship that is not apparent in the teaching of *Hadfield*. *Hugh* teaches a thought relationship model that uses a special connector to relate information, as in:

[0019] A special implementation of that connector system, a "composite connector," enables the Brain to interface with a number of data repositories at disparate network locations and of different types simultaneously. In another embodiment, when those data repositories themselves can be pre-configured under the thought/link definitions of the Brain, a Brain Client can be configured to interact with those repositories directly. In either case, means are taught for navigating among thoughts, creating new links among thoughts from same or different repositories, and of creating new thoughts.

Hugh, paragraph [0019].

Therefore, *Hugh* teaches away from use of hypertext links to use the composite link. Therefore, *Hadfield* and *Hugh*, when viewed as a whole fail to teach the claimed feature.

With regard to the feature of *an asynchronous communicator in said controller asynchronously communicates a document model update for updating a respective client document model subset maintained by each of the plurality of clients, wherein the client requests comprise serialized updates to the repository adapter document model to affect changes to selected documents for storage to a repository in a persistent storage of the computer system* *Hadfield* teaches contributor software updating a replica of the document in common storage and not the original, as in:

A system and method is provided for document collaboration between a managing author using a document management system (DMS), and one or more contributing authors. The system includes: a common storage area coupled to a plurality of user computer systems via a communications network; manager software stored on a first user computer system, where the *manager software exclusively controls change to a document stored in the common storage area; and contributor software stored on a second user computer system, where the contributor software provides a proposed change to a replica of the document stored in the common storage area.*

Hadfield, abstract (emphasis provided).

The contributor software of *Hadfield* is the client. The common storage area as taught by *Hadfield* contains both a copy of the original document and replicas for each client. Further, *Hadfield* teaches manager software that has exclusive control over changes to the document in the common storage area as in:

[0041] FIG. 3 is an example of the collaboration process performed on an original document of an embodiment of the present invention. The managing author 310 selects an original document (not shown) from the DMS and requests edits or comments from N contributing authors, for example, contributing authors 312, 314, 318, where N is a natural number. The original document becomes revision 320, when the managing author requests at least one contributing author for review, e.g., for edits and/or comments. The managing author 310 has control of who can access the replicas of the original document for editing, commenting, or a combination thereof, by using the DMS. Hence, for example, managing author can restrict access by allowing only contributing authors 312 and 314 to edit (and/or comment) on revision 320, and allow only contributing author 312 to edit revision 322. *Contributing author 312 edits (or make comments to) a replica of the original document and sends back a response 330. Contributing author 314 edits (or make comments to) another replica of the original document and sends back a response 332. The managing author 310 then reviews and accepts or rejects the proposed changes by the contributing authors 312 and 314 to revision 320.* The modified revision 320 becomes revision 322. If the managing author 310 is satisfied with the changes, then revision 322 is the final document 328 and the collaboration process is finished. If the managing author decides on another round of review, then revision 322 is sent to the contributing authors, e.g., contributing author 312 for edits/comments. Contributing author 312 edits a replica of revision 322 and sends back response 334. Then contributing author 312 edits the replica again and sends back a second response 336. The managing author then reviews and accepts or rejects changes from each response to revision 322. Again revision 322 becomes the final document 328, if the managing author 310 is satisfied. Otherwise the managing author 310 may request another round of review and modified revision 322 becomes a revision 324 for review by the contributing authors. For revision 324 contributing authors 312, 314, and 318 edit replicas of the revision 324 document and send responses 338, 340, and 342, respectively back to the managing author 310, and so forth until a final document 328 is produced.

Hadfield, page 4, paragraph [0041] (emphasis provided).

In contrast, the claimed feature does not have manager software to determine acceptance of an update by reviewing and accepting or rejecting the suggested change. The changes provided in the claimed feature are not “suggestions” as taught by *Hadfield*. Updates that are submitted are applied without the deliberation in contrast to the process as taught by *Hadfield*. Each client does not make a copy of the document as taught by *Hadfield*. Rather, the clients of the claimed feature use a *respective client document model subset maintained by each of the plurality of clients*. Therefore, *Hadfield* fails to teach the claimed feature. Accordingly, the combination of *Hadfield* and *Hugh*, when viewed as a whole, fails to teach the claimed feature.

With regard to the feature of *wherein said controller stores into said repository said selected documents successfully processed from said serialized updates, wherein said controller communicates to the client the serialized updates indicative of a success of the client request, said success defined by the success of the locking, processing and storing of the affected selected documents, wherein said controller, responsive to a client request for a document stored in said repository, sends the document from the repository*, the Examiner asserts *Hugh* teaches the feature at:

[0807] Next, Client A begins to modify at least one of the data items (data item 1) associated with Thought 1 (step 3400). In order to accomplish this, Client A requests from Server the right to modify that data item 1 (step 3401). Finding that data item 1 does not appear in its list of locked items--meaning that no other Client is presently modifying it) (steps 3402-3403)--the Server permits Client A to make that modification (step 3405). Server then "locks" that data item 1 by placing it in the list of locked items, and identifies Client A as "owning" that lock (step 3404). So "locking" that data item 1 will prohibit subsequent requesting Clients from modifying data item 1 until the Server removes data item 1 from its list of locked items, once Client A successfully uploads its modification (step 3406), or presumably, by timing out if Client A does not upload any modification during a pre-defined time period. *Once the Server returns a response that the update was successful (possibly after checking for intervening locks) Client A displays the modified data item 1* (steps 3407-3409), and the Server removes data item 1 from its list of locked items. Client B may repeat the same process (steps 3410-3419).

Hugh, page 47 paragraph [0807] (emphasis provided).

In the cited portion, *Hugh* teaches the server returns a response that the update was

successful. In contrast, the claimed feature *communicates to the client the serialized updates indicative of a success controller communicates to the client the serialized updates indicative of a success*. The claimed feature sends the successful serialized updates to the client. *Hugh* does not teach the sending of the successful updates to the requesting client. Therefore, *Hugh* does not teach the feature. The Examiner notes that *Hadfield* fails to teach the notification, therefore the combination of *Hadfield* and *Hugh*, when viewed as a whole, fails to teach the feature as claimed.

With regard to the feature, *wherein said apparatus communicates with said repository, to send repository requests for authoring said documents and to receive repository responses to said requests for processing said client requests wherein the repository is a WebDAV repository, wherein said client request to change said document relationship comprises said asynchronous communicator performing said step of communicating a document model update, a lock mechanism performing said step of locking said selected documents and a controller performing said step of storing, for each document related to said document identified in said client request*, as previously shown, neither cited reference provides communicating a document model update, therefore the combination of *Hugh* and *Hadfield* fails to teach the claimed feature.

Hugh further teaches a synchronization model and therefore teaches away from the single consistent repository model of the claimed features, as in:

[0814] *A fully-connected system maintains a single consistent repository of data by simply ensuring that only a single node at a time may modify that data. But in an environment in which users or their computers may not have full-time access to the network, means are needed for periodically synchronizing users' local copies of shared Brain data, because those copies become differentiated from the source while they are not connected. Such a synchronization method might also be more suited than a fully-connected system for instances when a single source of data is accessed and modified by a large number of users at once.*

Synchronization allows clients of a heavily used data source to interact with their latest copy of that data offline, and synchronize with a shared online copy online. General techniques of synchronizing an offline source of data with a shared data source available to many nodes on a network are known in the art. Examples include products such as the Truesync.TM. line of computer programs and services offered by Starfish Software, Inc. (www.truesync.com) which, among other benefits, permit users to synchronize their e-mail, contacts and other data created through Lotus Notes or Microsoft Outlook with numerous types of handheld devices

such as PalmPilots.TM. or personalized online portals like MyYahoo. The description below describes applying synchronization techniques to permit multiple nodes interact with and modify a shared repository of Brain related data, and takes into consideration the unique needs of a network structure of data capable of delivering generic or associative data types.

Hugh, page 48 paragraph [0814] (emphasis provided).

Therefore, there is no motivation to combine *Hugh* with *Hadfield* to achieve the result of the claimed feature. *Hadfield* and *Hugh*, in combination when viewed as a whole, fail to teach the features of claim 1. Under the standard of *In re Royka*, *Hadfield* and *Hugh* fail to provide a *prima facie* obviousness rejection of claim 1. Claims 18 and 27 have similar subject matter to that of claim 1 and are therefore also distinguished over the teaching of *Hadfield* and *Hugh*. Therefore, the rejection of claims 1, 18 and 27 under 35 U.S.C. § 103 has been overcome.

IV. Conclusion

The subject application is patentable over the cited references. Therefore, the subject application should now be in condition for allowance. Applicants invite the Examiner to call the undersigned at the below-listed telephone number if, in the opinion of the Examiner, a telephone conference would expedite or aid the prosecution of this application.

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Respectfully submitted,

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